



# orange illuminated selector switch head Ø22 2-position stay put

Local distributor code: 237223359 ZB5AK1253

Important message: A change in appearance may be noted on the product but does not affect its use in terms of function and safety. This makes it compatible with our Universal LED blocks

EAN Code: 3389110906080

#### Main

Range of product	Harmony XB5
Product or component type	Head for illuminated selector switch
Product compatibility	Universal LED
Device short name	ZB5
Bezel material	Dark grey plastic
Mounting diameter	22 mm
Head type	Standard
Sale per indivisible quantity	1
Shape of signaling unit head	Round
Type of operator	stay put
Operator profile	Orange standard handle
Operator position information	2 positions 90°

#### Complementary

CAD overall width	29 mm
CAD overall height	29 mm
CAD overall depth	43 mm
Net weight	0.016 kg
Mechanical durability	1000000 cycles
Station name	XALD 15 cut-outs XALK 25 cut-outs
Electrical composition code	M3 for <4 contacts using single blocks in front mounting with integral LED M6 for <2 contacts using single blocks in front mounting with integral LED and transformer M10 for <2 contacts using single blocks in front mounting with integral LED MF1 for <2 contacts using single blocks in front mounting with integral LED MR1 for <2 contacts using single blocks in rear mounting with integral LED M4 for <4 contacts using single and double blocks in front mounting with integral LED
Device presentation	Basic element

#### **Environment**

Protective treatment	тн
Ambient air temperature for storage	-4070 °C

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P degree of protection   P66 conforming to IEC 80529   P67	Ambient air temperature for operation	-4070 C
IPPG	Overvoltage category	Class II conforming to IEC 60536
NEMA 4X  Resistance to high pressure washer  RK degree of protection  RK degree of protection of the protection	IP degree of protection	IP67 IP69
Washer  Kr. degree of protection  Evilic 20047-2-5  Evilic 20047-3-5  Evilic 20047-3-1  Evilic 20048-2-6  Shock resistance  5 gr of the principle of Evilic 20048-2-6  Shock resistance  5 gr of the principle 20048-2-	NEMA degree of protection	
Standards  ENIEC 60047-5-5 ENIEC 60047-7-5 ENIEC 60047-7-5-1 CSA C222 No 14 ENIEC 60047-5-4 UL 608 JIS C6201-7-5-1 CSA C222 No 14 ENIEC 60047-6-4 UL 608 JIS C6201-1  Product certifications  BV CSA UL island DNV LROS (Loyds register of shipping) CL  Shock resistance  5 gn (*= 2500 Hz) conforming to IEC 60088-2-6  Shock resistance  30 gn (duration = 1 th ms) for half sine wave acceleration conforming to IEC 60088-2-77 50 gn (duration = 1 th ms) for half sine wave acceleration conforming to IEC 60088-2-77  Packing Units  Unit Type of Package 1  PCE  Number of Units in Package 1  Package 1 Height 5.5 cm Package 1 Height 24 g  Unit Type of Package 2  Number of Units in Package 3  Number of Units in Package 4  Number of		7000000 Pa at 55 °C, distance : 0.1 m
ENIEC 60947-1 JIS C8201-5-1 ENIEC 60947-5-1 ENIEC 60948-2-6 ENIEC 60948-2-6 ENIEC 60947-5-1 ENIEC 60947-5-1 ENIEC 60948-2-6 ENIEC 60948-2-6 ENIEC 60947-5-1 ENIEC 60948-2-6 ENIEC 60948-2-6 ENIEC 60948-2-6 ENIEC 60947-5-1 ENIEC 60948-2-6 ENIEC 60948-2-6 ENIEC 60948-2-6 ENIEC 60947-5-1 ENIEC 60948-2-6 ENIEC 60948-2 ENIEC 6094	IK degree of protection	IK06 conforming to IEC 50102
CSA UL listed DNV LROS (Lloyds register of shipping) GL  Vibration resistance 5 gn (f= 2500 Hz) conforming to IEC 80088-2-8  Shock resistance 30 gn (duration = 18 ms) for half sine wave acceleration conforming to IEC 80088-2-27  Shock resistance 70 gn (duration = 11 ms) for half sine wave acceleration conforming to IEC 80088-2-27  Packing Units  Unit Type of Package 1 PCE  Number of Units in Package 1 1  Package 1 Height 3.5 cm  Package 1 Weight 5.5 cm  Package 1 Weight 24 g  Unit Type of Package 2 S02  Number of Units in Package 2 100  Package 2 Height 15 cm  Package 2 Height 30 cm  Package 2 Length 40 cm  Package 2 Units in Package 2 7.722 kg  Offer Sustainability  Sustainabile offer status Green Premium product  REACh Regulation REACh Declaration  REACh Gree of SVHC Yes  EU ROHS Directive Pro-active compliance (Product out of EU RoHS legal scope)  EU ROHS Declaration  China RoHS Regulation China ROHS declaration	Standards	EN/IEC 60947-1 JIS C8201-5-1 EN/IEC 60947-5-1 CSA C22.2 No 14 EN/IEC 60947-5-4 UL 508
Shock resistance 30 gn (duration = 18 ms) for half sine wave acceleration conforming to IEC 60068-2-27 50 gn (duration = 11 ms) for half sine wave acceleration conforming to IEC 60068-2-27 Packing Units  Unit Type of Package 1 PCE  Number of Units in Package 1 1  Package 1 Height 3.5 cm  Package 1 Length 5.5 cm  Package 1 Weight 24 g  Unit Type of Package 2 S02  Number of Units in Package 2 100  Package 2 Height 15 cm  Package 2 Weight 30 cm  Package 2 Weight 40 cm  Package 2 Weight 2.722 kg  Offer Sustainability  Sustainable offer status Green Premium product  REACh Regulation REACh Declaration  REACh Bediaration  Toxic heavy metal free Yes  Mercury free Yes  China RoHS Regulation China RoHS declaration	Product certifications	CSA UL listed DNV LROS (Lloyds register of shipping)
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Package 2 Length 40 cm  Package 2 Weight 2.722 kg  Offer Sustainability Sustainable offer status Green Premium product  REACh Regulation REACh Declaration  REACh free of SVHC Yes  EU RoHS Directive Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration  Toxic heavy metal free Yes  Mercury free Yes  China RoHS Regulation China RoHS declaration	Package 2 Height	15 cm
Package 2 Weight  2.722 kg  Offer Sustainability Sustainable offer status  Green Premium product  REACh Regulation  REACh Declaration  REACh free of SVHC  Yes  EU RoHS Directive  Pro-active compliance (Product out of EU RoHS legal scope)  EU RoHS Declaration  Toxic heavy metal free  Yes  Mercury free  Yes  China RoHS Regulation  China RoHS declaration	Package 2 Width	30 cm
Offer Sustainability Sustainable offer status Green Premium product  REACh Regulation REACh Declaration  REACh free of SVHC Yes  EU RoHS Directive Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration  Toxic heavy metal free Yes  Mercury free Yes  China RoHS Regulation China RoHS declaration	Package 2 Length	40 cm
Sustainable offer status  Green Premium product  REACh Regulation  REACh Declaration  REACh free of SVHC  Yes  EU RoHS Directive  Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration  Toxic heavy metal free  Yes  Mercury free  Yes  China RoHS Regulation  China RoHS declaration	Package 2 Weight	2.722 kg
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China RoHS Regulation China RoHS declaration	Toxic heavy metal free	Yes
	Mercury free	Yes
RoHS exemption information Yes	China RoHS Regulation	China RoHS declaration
	RoHS exemption information	Yes

invironmental Disclosure Product Environmental Profile				
Circularity Profile	End of Life Information			
Contractual warranty				

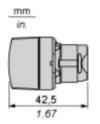
18 months

Warranty

# **ZB5AK1253**

**Dimensions Drawings** 

#### **Dimensions**

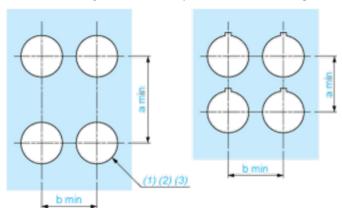




Mounting and Clearance

Panel Cut-out for Pushbuttons, Switches and Pilot Lights (Finished Holes, Ready for Installation)

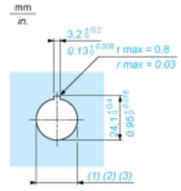
#### Connection by Screw Clamp Terminals or Plug-in Connectors or on Printed Circuit Board



- (1) Diameter on finished panel or support
- (2) For selector switches and Emergency stop buttons, use of an anti-rotation plate type ZB5AZ902 is recommended.
- (3) Ø22.5 mm recommended (Ø22.3  $_0^{+0.4}$ ) / Ø0.89 in. recommended (Ø0.88 in.  $_0^{+0.016}$ )

Connections	a in mm	a in in.	b in mm	b in in.
By screw clamp terminals or plug-in connector	40	1.57	30	1.18
By Faston connectors	45	1.77	32	1.26
On printed circuit board	30	1.18	30	1.18

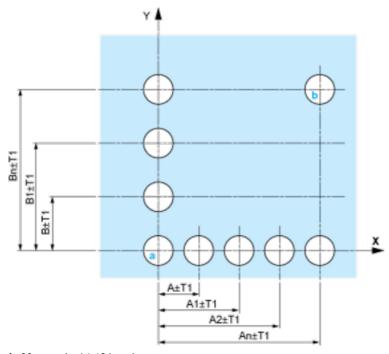
#### **Detail of Lug Recess**



- (1) Diameter on finished panel or support
- (2) For selector switches and Emergency stop buttons, use of an anti-rotation plate type ZB5AZ902 is recommended.
- (3) Ø22.5 mm recommended (Ø22.3  $_0^{+0.4}$ ) / Ø0.89 in. recommended (Ø0.88 in.  $_0^{+0.016}$ )

#### Pushbuttons, Switches and Pilot Lights for Printed Circuit Board Connection

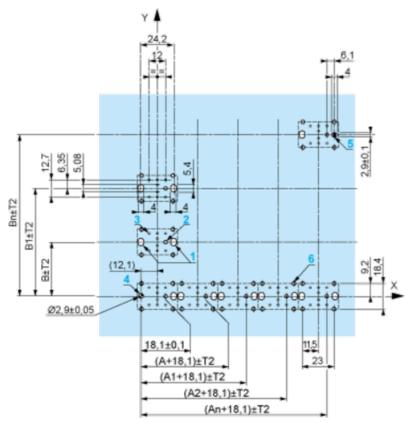
#### Panel Cut-outs (Viewed from Installer's Side)



**A:** 30 mm min. / 1.18 in. min. **B:** 40 mm min. / 1.57 in. min.

#### Printed Circuit Board Cut-outs (Viewed from Electrical Block Side)

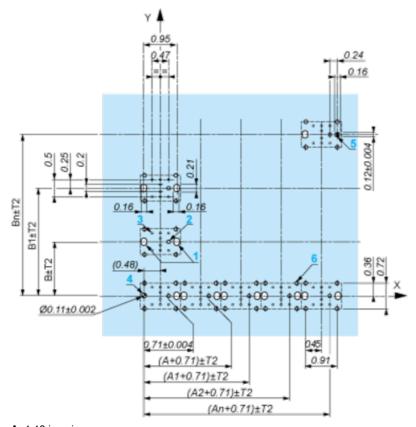
Dimensions in mm



**A:** 30 mm min.

**B**: 40 mm min.

Dimensions in in.



**A:** 1.18 in. min. **B:** 1.57 in. min.

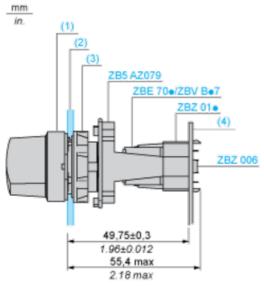
#### General Tolerances of the Panel and Printed Circuit Board

The cumulative tolerance must not exceed 0.3 mm / 0.012 in.: T1 + T2 = 0.3 mm max.

#### **Installation Precautions**

- Minimum thickness of circuit board: 1.6 mm / 0.06 in.
- Cut-out diameter: 22.4 mm ± 0.1 / 0.88 in. ± 0.004
- Orientation of body/fixing collar ZB5AZ009: ± 2 30' (excluding cut-outs marked a and b).
- Tightening torque of screws ZBZ006: 0.6 N.m (5.3 lbf.in) max.
- Allow for one ZB5AZ079 fixing collar/pillar and its fixing screws:
  - $\circ$  every 90 mm / 3.54 in. horizontally (X), and 120 mm / 4.72 in. vertically (Y).
  - $\circ$   $\;$  with each selector switch head (ZB5AD•, ZB5AJ•, ZB5AG•).

The fixing centers marked  ${\bf a}$  and  ${\bf b}$  are diagonally opposed and must align with those marked  ${\bf 4}$  and  ${\bf 5}$ .



- (1) Head ZB5AD•
- (2) Panel
- (2) Nut
- (4) Printed circuit board

### Mounting of Adapter (Socket) ZBZ01•

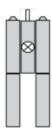
- 1 2 elongated holes for ZBZ006 screw access
- 2 1 hole Ø 2.4 mm ± 0.05 / 0.09 in. ± 0.002 for centring adapter ZBZ01•
- $3.8 \times \emptyset 1.2 \text{ mm} / 0.05 \text{ in. holes}$
- 4 1 hole Ø 2.9 mm ± 0.05 / 0.11 in. ± 0.002, for aligning the printed circuit board (with cut-out marked a)
- 5 1 elongated hole for aligning the printed circuit board (with cut-out marked b)
- 6 4 holes Ø 2.4 mm / 0.09 in. for clipping in adapter ZBZ01•

Dimensions An + 18.1 relate to the Ø 2.4 mm  $\pm$  0.05 / 0.09 in.  $\pm$  0.002 holes for centring adapter ZBZ01•.

# **ZB5AK1253**

Technical Description

**Electrical Composition Corresponding to Code M3** 



# **ZB5AK1253**

Technical Description

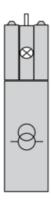
**Electrical Composition Corresponding to Code M4** 



# **ZB5AK1253**

Technical Description

**Electrical Composition Corresponding to Codes M6 and P2** 



# **ZB5AK1253**

Technical Description

Electrical Composition Corresponding to Codes M5, M10, MF1, MR1 and MF2



# **ZB5AK1253**

Technical Description

Lea	en	d
	$\sim$ .	•

Single contact



Double contact



Light block



Possible location



# **ZB5AK1253**

Technical Description

## Sequence of Contacts Fitted to 2-position Selector Switch Body

#### Position 315°



Push	Position	Тор		
		Bottom	$\triangle$	$\triangle$
	Location		Left	Right
	State		0	0
Contacts	N/O		open	open
	N/C		closed	closed

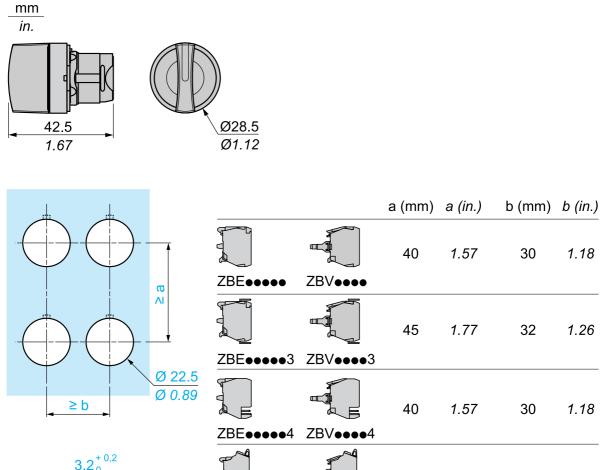
#### Position 45°

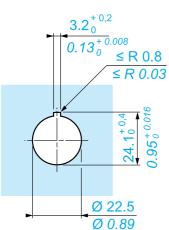


Push	Position	Тор		П	
		Bottom			
	Location		Left		Right
	State		1	$\otimes$	1
Contacts	N/O		closed		closed
	N/C		open		open

**Technical Illustration** 

#### **Dimensions**





		40	1.57	30	1.18
ZBE●●●●	ZBV●●●				
		45	1.77	32	1.26
ZBE••••3	ZBV••••3				
		40	1.57	30	1.18
ZBE••••4	ZBV•●●4				
ZBE••••5	ZBV••••5	50	1.97	30	1.18
		40	1.57	30	1.18
ZBE••••9	ZBV••••9				
ZDDT	70014	40	1.57	30	1.18
ZBRT●	ZBRV1				

Recommended replacement(s)